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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,222	12/21/2001	Jin Hee Jung	8733.445.00	3350

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EXAMINER
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FINEMAN, LEE A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/024,222

Applicant(s)

JUNG, JIN HEE

Examiner

Joshua L. Pritchett  
*for Lee P. Pritchett*

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 43,44 and 47-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43,44 and 47-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This action is in response to Amendment filed May 22, 2005. Claim 47 has been amended as requested by applicant.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 43, 44 and 49 rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi (US 6,046,787) in view of Ito (US 5,734,416).

Regarding claims 43-44 and 49, Nishiguchi discloses a stereoscopic display device (fig. 5), comprising a display panel (all elements between glass substrates 102a and 102b) having first (103b) and second (103a) pixels for displaying left-eye and right-eye image information respectively (column 15, lines 24-28); a polarizer (102b) on the display panel (fig. 5); a transparent substrate (106a) on the polarizer (see column 17, lines 48-55); and a retardation layer (106) having first (106c) and second (106b) polarizing cell areas corresponding to the first and second pixels over the display panel (fig. 5) and, the first and second polarizing cell areas

Art Unit: 2872

outputting first and second circularly polarized lights, respectively, the circularly polarized light being substantially perpendicular to the second linearly polarized light (column 16, lines 6-24 and lines 48-53), wherein the polarizer, the transparent substrate and the retardation layer are integrally formed as a single unit to be mounted onto the display in a single step (column 17, lines 3-8); wherein the display panel is a liquid crystal display (LCD) panel (column 16, line 17); and wherein the first and second polarizing cell areas are arranged in alternating lines (see fig. 1). Nishiguchi discloses the claimed invention except for the first and second polarizing cell areas outputting first and second linearly polarized lights, the first linearly polarized light being substantially perpendicular to the second linearly polarized light. It is very well known in the art for stereoscopic displays to use either circular or linear polarized light to separate the light into right and left eye channels to provide three-dimensional images. For example, Ito teaches a conventional stereoscopic system (fig. 6) using a first linearly polarized light being substantially perpendicular to a second linearly polarized light to provide three-dimensional images (column 1, lines 43-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use linearly polarized light as shown by Ito et al. instead of circularly polarized light in the system of Nishiguchi as these types of polarized light perform art recognized equivalent functions in the system.

Claims 48, 50, 52-56, 58-60 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi (US 6,046,787) in view of Moseley (US 6,046,849) and Ito (US 5,734,416).

Regarding claims 52-56, 59 and 62, Nishiguchi further discloses a method for fabricating a stereoscopic display device (figs. 2A-2F and 5) comprising preparing a LCD panel (all elements between glass substrates 102a and 102b) having first (103b) and second (103a) pixels for displaying left-eye and right-eye image information respectively (column 15, lines 24-28) eye image information, respectively; and forming a retardation layer (see fig. 2A-2F) having first (12a) and second (12b) polarizing cell areas corresponding to the first and second pixels over the display panel by irradiating a light (fig. 2B1) through a mask (14); and further comprising polymerizing the retardation layer by irradiating a light (column 11, line 20-column 12, line 34). Nishiguchi discloses the claimed invention except for the first and second polarizing cell areas outputting first and second linearly polarized lights, the first linearly polarized light being substantially perpendicular to the second linearly polarized light; and forming the retardation layer by a single light irradiation and wherein forming the retardation layer does not include removing a portion of the retardation layer. It is very well known in the art for stereoscopic displays to use either circular or linear polarized light to separate the light into right and left eye channels to provide three-dimensional images. For example, Ito teaches a conventional stereoscopic system (fig. 6) using a first linearly polarized light being substantially perpendicular to a second linearly polarized light to provide three-dimensional images (column 1, lines 43-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use linearly polarized light as shown by Ito et al. instead of circularly polarized light in the system of Nishiguchi as these types of polarized light perform art recognized equivalent functions in the system. Further, Moseley et al. teach a polarizer stereoscopic display apparatus (figs. 10-11) comprising a liquid crystal display panel (1), a polarizer (2) and a patterned

Art Unit: 2872

retarder material (67 in 20 see figs. 17 and 18) wherein the retardation layer (67) is formed by a single light irradiation (figs. 17a-17d) and wherein forming the retardation layer does not include removing a portion of the retardation layer (figs. 17a-17d). It would have been obvious to one of ordinary skill in the art at the time the invention was made form the retardation layer of Nishiguchi by the single light irradiation method taught by Moseley et al. as it is a less time consuming method because it has less steps.

Regarding claims 48, 50, 58 and 60, Nishiguchi in view of Ito or Nishiguchi in view of Moseley et al. and Ito et al. as set forth above disclose the claimed invention except for wherein the retardation layer includes a chiral dopant and wherein the first and second polarizing cell areas are arranged in a checkered pattern. Moseley et al. further teach wherein the patterned retarder material (67 in 20 see figs. 17 and 18) containing a chiral dopant for enabling light modulation (column 18, lines 1-7) that is arranged in alternating lines (figs. 17a-17d) or a checkered pattern (figs. 18a-18j). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the retarder material of Nishiguchi in view of Ito et al. or Nishiguchi in view of Moseley et al. and Ito et al, as set forth above include a chiral dopant and being exposed to light so as to be patterned with either alternating lines or a checkered pattern to provide a guiding twisted retarder (column 18, lines 4-6, Moseley).

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi (US 6,046,787) in view of Ito (US 5,734,416) as applied to claim 43 above, and further in view of Deanne (US 6,627,305).

Art Unit: 2872

Nishiguchi in view of Ito as applied to claim 43 above discloses the claimed invention except for explicitly stating that the transparent substrate is made from a solvent-proof polymer. Solvent proof polymers such as polyimide are well known in the art for use as substrates in liquid crystal systems as evidenced by Deanne (column 1, lines 38-39). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a well-known solvent proof polymer such as polyimide disclosed by Deanne et al. as the material for the transparent substrate of Nishiguchi in view of Ito. to reduce the weight of the system (Deanne, column 1, lines 37-38).

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi (US 6,046,787) in view of Moseley (US 6,046,849) and Ito (US 5,734,416) as applied to claim 56 above, and further in view of Deanne (US 6,627,305).

Nishiguchi in view of Moseley and Ito as applied to claim 56 above disclose the claimed invention except for explicitly stating that the transparent substrate is made from a solvent-proof polymer. Solvent proof polymers such as polyimide are well known in the art for use as substrates in liquid crystal systems as evidenced by Deanne (column 1, lines 38-39). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a well-known solvent proof polymer such as polyimide disclosed by Deanne et al. as the material for the transparent substrate of Nishiguchi in view of Moseley et al. and Ito et al. to reduce the weight of the system (Deanne, column 1, lines 37-38).

Art Unit: 2872

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi (US 6,046,787) in view of Ito (US 5,734,416) as applied to claim 43 above, and further in view of Franklin (EP 0 477 882).

Nishiguchi in view of Ito as applied to claim 43 above discloses the claimed invention except for wherein the retardation layer is covered with a protecting polymer. Franklin discloses a polarizer stereoscopic display apparatus (fig. 1 and fig. 8a) comprising a liquid crystal display panel (12); a polarizer (column 2, lines 8-10 and fig. 8a); and a patterned retarder (22) wherein the patterned retarder is covered with a protecting polymer (column 4, lines 22-24 and fig. 8a). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a protecting polymer as taught by Franklin to the retardation layer of Nishiguchi in view of Ito to prevent accidental damage to the layer.

Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi (US 6,046,787) in view of Moseley (US 6,046,849) and Ito (US 5,734,416) as applied to claim 53 above, and further in view of Franklin (EP 0 477 882).

Nishiguchi in view of Moseley and Ito as applied to claim 53 above disclose the claimed invention except for wherein the retardation layer is covered with a protecting polymer. Franklin discloses a polarizer stereoscopic display apparatus (fig. 1 and fig. 8a) comprising a liquid crystal display panel (12); a polarizer (column 2, lines 8-10 and fig. 8a); and a patterned retarder (22) wherein the patterned retarder is covered with a protecting polymer (column 4, lines 22-24 and fig. 8a). It would have been obvious to one of ordinary skill in the art at the time the invention



Art Unit: 2872

was made to add a protecting polymer as taught by Franklin to the retardation layer of Nishiguchi in view of Moseley and Ito to prevent accidental damage to the layer.

### *Response to Arguments*

Applicant's arguments filed May 22, 2006 have been fully considered but they are not persuasive.

Applicant argues the prior art fails to teach first linearly polarized light substantially perpendicular to the second linearly polarized light. Applicant argues Nishiguchi teaches the directions of rotation are different but fails to teach substantially perpendicular. Nishiguchi teaches the directions of the light differ by 90-degrees (col. 7 lines 52-55). Nishiguchi further teaches the use of linearly polarized light having substantially perpendicular orientations (col. 2 lines 4-7). Further it is known that a quarter wave plate can be used to change circular polarization to linearly polarization. Applicant further argues Ito teaches the light emitting from a polarizer not a retardation plate as set forth in the claim language. The retardation plate disclosed by the current invention comprises polarizing cells so the light emitted from the claimed retardation plate is essentially emitted from a polarizer. Therefore there is no functional difference between the element emitting light in Ito and the element emitting light in the current application. Based on the combination of references as set forth in the rejection above the prior art satisfies all the claim limitations and the rejection is proper.

Applicant's arguments, see Amendment, filed May 22, 2006, with respect to 35 U.S.C. 112 1<sup>st</sup> paragraph rejection have been fully considered and are persuasive. The 35 U.S.C. 112 1<sup>st</sup> paragraph rejection of claims 43, 44 and 47-62 has been withdrawn. Applicant argues Fig. 8 provides support for linearly polarized light in two substantially perpendicular directions. Examiner agrees and the 35 U.S.C. 112 1<sup>st</sup> paragraph rejection has been withdrawn.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

Art Unit: 2872

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua L Pritchett   
Examiner  
Art Unit 2872

  
**DREW A. DUNN**  
**SUPERVISORY PATENT EXAMINER**